



November 6, 2013

SPEARS MANUFACTURING CO., INC.
KEVIN CROUCH
1 GATEWAY CT. SUITE A
BOLINGBROOK IL 60440

Re: Description: PIPE, FITTINGS AND CEMENT, ALTERNATE PLUMBING SYSTEM
Manufacturer: SPEARS MANUFACTURING CO., INC.
Product Name: SPEARS LOW EXTRACTABLE PVC FITTINGS, HARVEL LXT SCH. 80 PIPE AND
SPEARS ONE-STEP LX-5 CEMENT
Model Number(s): PIPE: 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4, AND 6
FITTINGS: TEE (SlipxSlipxSlip), 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4, 6; REDUCING TEE
(SlipxSlipxSlip) 1x1x1, 1-1/2x1-1/2x1, 2x2x1, 2x2x1-1/2, 3x3, 2, 4x4x3, 6x6x3, 6x6x4; 90
deg. ELL (SlipxSlip) 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4, 6; 45 deg. ELL (SlipxSlip) 1/2, 1, 1, 1-1/4,
1-1/2, 2, 3, 4, 6; COUPLING (SlipxSlip), 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4, 6; REDUCER
COUPLING (SlipxSlip), 1x1/2, 1x1, 1-1/4x1, 1-1/2x1, 1-1/2x1-1/4, 2x1, 2x1-1/2, 3x2, 4x2,
4x3, 6x4; FEMALE ADAPTER (SlipxFipt) 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4; MALE ADAPTER
(MiptxSlip) 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4; REDUCER BUSHING (SpigxSlip) 1x1/2, 1x1/2,
1x1, 1-1/4x1/2, 1-1/2x1, 1-1/2x1-1/4, 2x1, 2x1-1/2, 3x2, 4x3, 6x4; REDUCER BUSHING
FLUSH STYLE (SpigxFipt) 1/2x1/4, 1/2x3/8, 1x1/4, 1x1/2, 1x3/8, 1x1/2, 1x1; REDUCING
FEMALE ADAPTER (Spigx SR Fipt) 1/2x1/4, 1x1/4, 1x1/4; CAP (Slip) 1/2, 1, 1, 1-1/4, 1-1/2,
2, 3, 4, 6; FLANGE (Slip) Van Stone Style 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4, 6; UNION (Slip x
Slip) EPDM and VITON O-Ring Seal, 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4; TANK ADAPTERS
EPDM GASKET (Soc x Fipt) 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4; DIAPHRAGM VALVES 1/2, 1, 1,
1-1/4, 1-1/2, 2; SAFE BLOCK BALL VALVES (EPDM and VITON O-RINGS) 1/2, 1, 1, 1-1/4,
1-1/2, 2, 3, 4; CHECK VALVES (EPDM and VITON O-RINGS) 1/2, 1, 1, 1-1/4, 1-1/2, 2, 3, 4
CEMENT, HARVEL LXT ONE-STEP
Product File No: 20130292

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters SPS 382 through 384, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an alternate approval to s. SPS 384.30 (4) (e) 1 and 384.30 (4) (l) 2e based on the Wisconsin Statutes and the Wisconsin Administrative Code. This approval is valid until the end of November 2018.

This approval supersedes the approval issued on January 14, 2009 under product file number 2090007.

This alternate approval is required because the pipe and fittings do not meet that pertinent standards presently listed in table SPS 384.30-7 and because PVC is not presently listed in table 384.30-8.

This alternate approval is contingent upon compliance with the following stipulation(s):

- This product may be installed for the following water use(s):
 - a. Water service pipe
 - b. Cold water distribution piping Above ground
 - c. Cold water distribution piping Underground
- This product must be installed in accordance with the manufacturer's printed instructions, product approval, and plan approval. If there is a conflict between the manufacturer's instructions and the product approval and/or plan approval, the product approval and/or plan approval will take precedence.

- Pipe sizing for this product must comply with Tables HLXT-1 or 2 entitled Maximum Allowable Load for Harvel LXT PVC, Sch. 80; (C=150). Table notes: WSFU means water supply fixture units, GPM means gallons per minute, FM means predominately flushometer type water closets or siphon jet urinals, FT means predominately flush tank type water closets or wash down urinals, and NP means not permitted.

TABLE HLXT-1
Maximum Allowable Load for Harvel LXT PVC, Sch. 80; (C=150)

Pressure Loss Due to Friction (in lbs. per 100 ft. of Length)	Pipe Diameter (in Inches)																		
	1/2		3/4		1			1-1/4											
	WSFU		WSFU		WSFU			WSFU											
	GPM	FT	GPM	FT	GPM	FM	FT	GPM	FM	FT									
0.5	0.5	0.5	1.5	1.5	3.0	-	3.0	6.5	-	8.0									
1	1.0	1.0	2.0	2.0	4.5	-	5.0	10.0	4.0	13.0									
2	1.0	1.0	3.0	3.0	6.5	-	8.0	14.5	4.5	20.5									
3	1.5	1.5	4.0	4.0	8.0	-	10.0	18.0	6.0	26.5									
4	2.0	2.0	5.0	6.0	9.5	-	12.5	21.0	7.0	32.0									
5	2.0	2.0	5.5	6.5	11.0	4.0	15.0	23.0	7.5	37.0									
6	2.5	2.5	6.0	7.0	12.0	4.0	16.5	26.0	9.0	45.0									
7	2.5	2.5	6.5	8.0	13.0	4.5	18.0	28.0	11.0	50.0									
8	3.0	3.0	7.0	9.0	14.0	4.5	20.0	30.0	14.5	57.0									
9	3.0	3.0	7.5	9.5	15.0	5.0	21.5	NP											
10	3.5	3.5	8.0	10.0	16.0	5.0	23.0												
11	3.5	3.5	8.5	10.5	16.5	5.5	24.0	NP											
12	3.5	3.5	9.0	11.5	17.0	5.5	25.0												
13	4.0	4.0	9.0	11.5	NP														
14	4.0	4.0	9.5	12.5															
15	4.0	4.0	10.0	13.0	NP														
16	4.5	5.0	10.0	13.5															
17	4.5	5.0	NP																
18	4.5	5.0																	
19	5.0	6.0	NP																
20	NP																		

- Pipe sizing for this product must comply with Tables HLXT-1 or 2 entitled Maximum Allowable Load for Harvel LXT PVC, Sch. 80; (C=150). Table notes: WSFU means water supply fixture units, GPM means gallons per minute, FM means predominately flushometer type water closets or siphon jet urinals, FT means predominately flush tank type water closets or wash down urinals, and NP means not permitted.

TABLE HLXT-2
Maximum Allowable Load for Harvel LXT PVC, Sch. 80; (C=150)

Pressure Loss Due to Friction (in lbs. per 100 ft. of Length)	Pipe Diameter (in Inches)								
	1-1/2			2			3		
	WSFU			WSFU			WSFU		
	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT
0.5	10.5	4.0	14.0	20.5	6.5	31.0	60.0	75.0	175
1	15.0	5.0	21.5	30.0	13.5	55.0	87.0	180.0	310
2	22.0	7.0	35.0	44.0	36.0	106.0	127.0	406.0	511
3	27.0	10.0	47.0	55.0	62.0	150.0	159.0	615.0	688
4	32.0	16.0	60.0	64.0	86.0	195.0	160.0	627.0	697
5	36.0	22.0	73.0	71.0	114.0	233.0	NP		
6	40.0	30.0	86.0	NP					
7	42.0	34.0	102.0						
8	NP								

	4			6		
	WSFU			WSFU		
	GPM	FM	FT	GPM	FM	FT
0.5	125	393	500	369	2444	2444
1	183	800	829	537	4176	4176
2	266	1490	1490	636	5935	5965
3	280	1626	1626	NP		
4	NP					

- This product must be installed in accordance with Harvel's installation instructions printed in the Harvel LXT HPB-114, Revised 5/15/02, product brochure.
- The piping must be labeled with HARVEL LXT, pipe size in inches, SCH 80, and Trace number (i.e.: 6 2303 1).
- The fittings must be labeled with Spears, NSF pw PVC1, pipe size in inches, SCH 80, and part number.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

Glen W. Schlueter
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